ANNUAL MEETING OF MARYLAND VEGETABLE GROWERS' ASSOCIATION

Wednesday, January 12, 1944.

Morning Session

A.M.
9:00 - Call to Order - President, Clay P. Whiteford

Discussion

Should There be Commodity Sub-groups to Present Recommendations to War Board and OPA Relative to Price Ceilings?

Market Tomatoes - George Phillips, George Strattman
Sweet Potatoes - Robert Williams, S. H. Rayner
Cantaloupes and Cucumbers - J.E. Andrews, Egbert Hawkins
Snap Beans - F. Ridgely Todd, A.Lee Towson, E. Mace Smith
Canning Crops - F. M. Shook, Clay P. Whiteford, Clay Webb.

Report of Nominating, Audit, and Resolution Committees.

Afternoon Session

P.M.
2:00 - Horticultural Council (Joint Session) - F. Ridgely Todd, Chairman

Discussion

Action of New Jersey Growers with Respect to Prices and Price Ceilings and Their Recommendations to State War Board - Allen G. Waller

What is Situation With Respect to Price Levels on Canning Crops? F. B. Bomberger.

Recommendations of Fruit Growers' Committees on Price Levels and Ceilings in 1944 for Peaches, Apples, and Strawberries?

Plans of Post War Planning Committee in Horticulture - H. H. Nuttle
Stanley Fulton

NEWS-LETTER

Issued by

The Maryland Vegetable Growers' Association

W. R. Ballard, Secretary-Treasurer

Vol. XXI, No. 1 College Park, Maryland January 1944

The Annual Meeting. - The attendance at the sessions of the Association and of the Horticultural Council was quite gratifying and the discussions were lively and interesting. The threat of ceiling prices on all horticultural crops served to stir growers up to the realization that their views would not prevail unless they were carefully thought out and effectively presented to the War Boards having these matters in charge. It was the consensus of opinion that committees representing the various commodities could best collect the data needed and formulate recommendations. These committees are in the process of formation.

The officers elected for 1944 are as follows:

President, J. E. Andrews, Hurlock
Vice President, A. Lee Towson, Chestertown
Secretary-Treasurer, W. R. Ballard, College Park
Director (3 year term), C. C. Phillips, Quantico
Director for Farm Bureau, George H. Strattman, Sparrows Point
Delegate to Farm Bureau, Egbert Hawkins, Harmans

A. Morris Todd, for the Auditing Committee, reported that the treasurer's books had been inspected and found satisfactory. Balance in the treasury as of December 31, 1943 is $41.89.

Resolutions referring to "Sweet Potato Points for Deferment" were presented by the Resolution Committee.

"In reviewing the points allowed by deferment authorities for several vegetable crops, we find string beans requiring only three months to grow, yet are given one point per acre rate. Tomatoes requiring only four months to grow receive one point per acre rate - many other vegetables the same and yet sweet potatoes being a crop that requires at least ten months in growing and marketing takes fully as much labor to prepare plant beds, set plants, cultivate and harvest as it does any of the above mentioned crops. In the face of all this, sweet potatoes require two acres to obtain one point or thirty-two acres for the deferment of one man.

This causes an extreme hardship on the sweet potato growers of Maryland. Thus we most earnestly petition that this unfair condition be corrected and suggest that they be placed on a one point per acre basis."

Rotenone Supplies Inadequate. - Reports indicate that supplies of rotenone available for this season's use may be twenty-five to thirty per cent below minimum requirements. Despite expansion of permitted uses, rotenone should be saved for most essential needs and all possible conservation practiced. The situation is critical. Only negligible supplies of pyrethrum are available for agriculture.

Plowman's Folly. - A controversy as to the merits of plowing versus disking is raging due to statements made by Mr. Falkner in his book with the above title. It will no doubt be difficult to convince most vegetable growers that it is time to discard the plowshare. Because of intensive culture it is not often possible to put fields into cover crops for plowing down, advisable as this might be.

Mr. Falkner's ideas have enough basis in fact to warrant consideration, but this is a big country with widely varying conditions. What will work on one soil or with one crop may not necessarily work on other soils or other crops. It is difficult to see how phosphate fertilizers, for example, can be incorporated with the soil throughout the root area with only shallow disking. Leaving plant residues near the surface undoubtedly acts as a mulch to conserve moisture. In case of diseased plant tissues it would be advisable in many cases to turn them under more deeply.

In the long run the controversy will do much good as it will force investigators and growers to re-examine the whole philosophy of soil handling and perhaps to formulate methods of procedure better adapted to the conservation of depleted soil wealth.

Controlling Damping-Off. - One of the difficulties experienced by growers of early plants in the house, hotbed or greenhouse, is the heavy losses sometimes occasioned by an outbreak of various damping-off funguses. Sterilizing the soil, or using various disinfecting agents have been used with more or less success.

Publicity has been given in recent months to a comparatively simple method which has given such uniformly good results that it seems appropriate to describe the method. It consists merely in using pulverized sphagnum moss as the medium in which to plant seeds rather than soil. New or disinfected containers should be used and these should be filled to within a half-inch of the top with the sphagnum after it is pressed down. Water thoroughly and repeat after eight to ten hours. Scatter seed over the surface and cover slightly with shredded moss. Cover with a pane of glass or newspapers until seeds begin to germinate, when they should be given light and air.

Transplant the seedlings to soil in flats or coldframes. Although the reason for it is not well understood, the use of the sphagnum results in almost complete control of the damping-off organisms.

The method has been used for more than twenty years at the Bell Station with 2500 species of plants with gratifying results. Using nutrient solutions will give stronger growth to the seedlings, but they can be kept small over a long period without permanent injury if desired.

FOURTEENTH ANNUAL MARYLAND VEGETABLE SHOW

Lord Baltimore Hotel, Baltimore, Maryland, January 11 to 14, 1944

Sponsored by the

Maryland Farm Bureau Federation and Maryland Vegetable Growers Association

REGULATIONS

No entry fee will be charged. Since this show is sponsored by the Maryland Vegetable Growers Association, all exhibitors should become members. Members will receive all reports issued by the association which will include a monthly news letter and the annual proceedings.

Exhibits may be entered only by the grower and owner of the crop. Only one exhibit may be entered in any class.

Exhibits should be sent by prepaid express or parcel post to the State Vegetable Show, Lord Baltimore Hotel, c/o Dr. R. A. Jehle or Mr. W. R. Ballard, Baltimore, Maryland, and should arrive not later than January 11th. Judging will begin at 10:00 A.M. on January 12th, so it is necessary to have the exhibits at the hotel before that time.

Arrangements for the return of the exhibits must be made by the exhibitors; otherwise, the exhibits will be disposed of by the Maryland Vegetable Growers Association.

White and Sweet Potatoes

Each exhibit shall consist of sixteen (16) potatoes.

Group I - Adult Certified

Open to all potato growers in Maryland who have produced seed potatoes eligible for certification. Exhibits must be selected from potatoes grown in fields which have passed all certification requirements of the Maryland Seed Certification Board in the field inspections.

		Premiums
Class I.	Irish Cobbler	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00 and 6th. $1.00
Class II.	Any Other Early or Medium Early Variety (Warba, Chippewa, Katahdin, etc.) Variety must be designated.	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00; and 6th. $1.00
Class III	Any Late Variety (Sequoia, Rural, Green Mountain, etc.) Variety must be designated.	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00; and 6th. $1.00
Class IV.	Sweet Potatoes, Any Variety Variety must be designated.	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00; and 6th. $1.00

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Class III	Any Late Variety (Sequoia, Rural, Green Mountain, etc.) Variety must be designated.	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00; and 6th. $1.00
Class IV.	Sweet Potatoes, Any Variety Variety must be designated.	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00; and 6th. $1.00

Group II - Adult - Commercial

Open to all potato growers in Maryland.

Class V.	Irish Cobbler	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00 and 6th. $1.00
Class VI.	Any other early variety (Warba, Chippewa, Triumph, etc.) Variety must be designated	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00 and 6th. $1.00
Class VII.	Any Medium Early or Medium Late Variety (Katahdin, Pontiac, Earlaine #2, etc.) Variety must be designated	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00 and 6th. $1.00
Class VIII	Rural (Smooth or Russet)	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00 and 6th. $1.00
Class IX.	Sequoia	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00; and 6th. $1.00
Class X.	Any Other Late Variety (Dakota Red, Green Mountain, etc.) Variety must be designated	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00 and 6th. $1.00
Class XI.	Sweet Potatoes, Maryland Golden Sweet	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00; and 6th. $1.00
Class XII.	Sweet Potatoes - Any Other Variety Variety must be designated	1st. $4.00; 2nd. $3.00; 3rd. $2.00; 4th. $1.50; 5th. $1.00 and 6th. $1.00

Group III - 4-H Club Certified and Commerical

Open to all 4-H Club members listed in the State Office who had potatoes for their project.

Class XIII.	Early Varieties (Irish Cobbler, Warba, Triumph, etc.) Variety must be designated	1st. $4.00; 2nd. $3.00; 3rd. $2.00 4th. $1.50; 5th. $1.00 and 6th. $1.00
Class XIV.	Medium Late Varieties (Green Mountain, Katahdin, Chippewa, etc.) Variety must be designated	1st. $4.00; 2nd. $3.00; 3rd. $2.00 4th. $1.50; 5th. $1.00; and 6th. $1.00
Class XV.	Late Varieties (Rurals, Dakota Red, Sequoia, etc.) Variety must be designated	1st. $4.00; 2nd. $3.00; 3rd. $2.00 4th. $1.50; 5th. $1.00 and 6th. $1.00

Group IV - F. F. A. Certified and Commercial

Open to all F. F. A. members who have potatoes for their project.

		Premiums
Class XVI.	Early Varieties (Irish Cobbler, Warba, Triumph, etc.) Variety must be designated	1st. $4.00; 2nd. $3.00; 3rd. $2.00 4th. $1.50; 5th. $1.00 and 6th. $1.00
Class XVII.	Medium Late Varieties (Green Mountain, Katahdin Chippewa, etc.) Variety must be designated	1st. $4.00; 2nd. $3.00; 3rd. $2.00 4th. $1.50; 5th. $1.00; and 6th. $1.00
Class XVIII.	Late Varieties (Rurals, Dakota Red, Sequoia, etc.) Variety must be designated	1st. $4.00; 2nd. $3.00; 3rd. $2.00 4th. $1.50; 5th. $1.00 and 6th. $1.00

Group V - 4-H or F. F. A. Certified or Commercial

		Premiums
Class XIX.	Sweet Potatoes, Any variety, Variety must be designated.	1st. $4.00; 2nd. $3.00; 3rd. $2.00 4th. $1.50; 5th. $1.00 and 6th. $1.00

VEGETABLES

		Premiums
Class XX	Best 3 heads cabbage, Flathead type	1st. $4.00; 2nd. $3.00; 3rd. $2.00
Class XXI	Best 3 heads cabbage, Ballhead type	1st. $4.00; 2nd. $3.00; 3rd. $2.00
Class XXII	Best 16 yellow onions	1st. $4.00; 2nd. $3.00; 3rd. $2.00
Class XXIII	Best 12 carrots, any var.	1st. $4.00; 2nd. $3.00; 3rd. $2.00
Class XXIV	Best 12 parsnips	1st. $4.00; 2nd. $3.00; 3rd. $2.00
Class XXV	Best 16 turnips	1st. $4.00; 2nd. $3.00; 3rd. $2.00
Class XXVI	Best 3 Hubbard Squash, any type	1st. $4.00; 2nd. $3.00; 3rd. $2.00
Class XXVII	Best 3 three pound baskets of mushrooms	1st. $4.00; 2nd. $3.00; 3rd. $2.00

NEWS-LETTER

Issued by

The Maryland Vegetable Growers' Association

W. R. Ballard, Secretary-Treasurer

Vol. XXI, No. 2 College Park, Maryland February 1944

Dr. R. A. Jehle reports that in 1943 a Garrett County potato grower sustained severe losses in his crop as a result of planting potatoes obtained from a car of Maine selected Katahdin seed stock with a ceiling price above the ceiling price allowed for table stock. A severe infestation of Ring Rot was found in his storage bin and he was obliged to dispose of the crop immediately to avoid further loss. In order to avoid further trouble from Ring Rot this year he will be obliged to disinfect his storage bin and all tools and containers which came in contact with the contaminated crop. He will be obliged to purchase new seed to plant his 1944 crop.

In order to save potato growers from a similar experience this year they should be warned to avoid planting anything but certified seed or home grown seed which is equivalent to certified seed. In addition to certified seed, ceiling prices above those of table stock will be allowed for a grade of seed stock known as "War Emergency" seed. Each state is permitted to set its own standard for War Emergency seed, subject to approval by the Bureau of Plant Industry. War Emergency seed is inferior to certified seed, for instance tolerances of leaf roll as high as 10%, mosaic as high as 5%, wilt as high as 10%, and ring rot as high as 1% are permitted in certain states. Potato growers should be warned not to use War Emergency unless certified seed is impossible to obtain and under no circumstances should War Emergency seed from states which tolerate any ring rot be planted. The states of Michigan, South Dakota, Nebraska, Ohio, New Hampshire, Nevada, Maine, Washington, Vermont, New York, New Jersey and Wisconsin do not allow any ring rot. Wyoming, Utah, and Colorado allow 1%. Minnesota and North Dakota allow one-half of 1%, California a trace and Oregon 1 specimen in a thousand.

Certified Seed Potato Stock. There was a limited supply of certified potato seed stock produced in Maryland last year. Maryland grown seed potatoes have given good results where suitable varieties have been selected.

There were 220 acres of Irish Cobbler certified in 1943. This was produced mainly in Somerset county. About 40 acres of Sequoia were produced, mostly in Garrett county. Other new varieties were produced only in limited quantities - 1 1/2 acres if Sebago, a little over 1 acre of Katahdin, 3/8 acre of Pontiac, and 1/8 acres each of Earlaine No. 2, Mesaba, Warba, and Pawnee. A little over 7 1/2 acres of Dakota Red were certified, mostly in Somerset county.

Fifteen and a half acres of Maryland Golden sweet potatoes were certified mostly in Wicomico county with lesser amounts in Somerset.

Growers desiring to purchase such certified stock should consult the county agent in the respective counties. A list of certified growers can be secured from Dr. R. A. Jehle, College Park, Maryland. Those wishing to grow

potatoes for certification should consult with Dr. Jehle as to stocks of seed approved for such use. He reports that "There are two sources of Maine seed stock which are suitable for planting the late seed crop. These are tuber unit certified seed stock and certified seed stock with readings not exceeding certification tolerance for Maine foundation seed potatoes as a result of reading on samples which were planted in Florida this winter. A list of these Maine growers can be obtained from E. L. Newdick, Chief, Division of Plant Industry, Augusta, Maine. Copies of this list have been sent to your County Agent. Some of the varieties which are listed are: Irish Cobbler, Green Mountain, Sequoia, Katahdin, Chippewa, and Sebago."

List of Eastern Shore Potato Growers with Seed which may be used for Planting Potato Fields to be Entered for Certification in 1944:

Somerset County

O. P. Carey, Pocomoke.....Irish Cobbler

John Hinks, Upper Fairmont.....Sequoia, Sebago, Dakota Red

Wicomico County

John Aydelotte, Salisbury.....Irish Cobbler

Worcester County

C. H. Corbin, Pocomoke.....Irish Cobbler

S. D. Corbin, Pocomoke.....Irish Cobbler

Carl Dryden, Newark.....Irish Cobbler.

Elizabeth Henry Hall, Berlin.....Irish Cobbler

Chester D. Holland, Pocomoke.....Irish Cobbler

A. C. Holloway, Newark.....Irish Cobbler

G. C. Johnson, Pocomoke.....Irish Cobbler

Preston Jones, Berlin.....Irish Cobbler

R. Newell Stagg, Snow Hill.....Irish Cobbler

Ben T. Truitt, Snow Hill.....Sequoia

L. W. Warren, Berlin.....Irish Cobbler

Thomas Taylor, Berlin.....Dakota Red

NEWS-LETTER

Issued by

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W. R. Ballard, Secretary-Treasurer

Vol. XXI, No. 3 College Park, Maryland March 1944

New Potato Bulletin. The Agricultural Experiment Station in cooperation with the Extension Service has just issued Bulletin No. X2, Quality, Adaptability and Disease Resistance of Potato varieties. The authors, R. A. Jehle and Margaret McPheeters record the results of studies made on 23 varieties of potatoes grown in Maryland.

Table I gives the average yield of potatoes grown in Frederick, Garrett, Worcester, Howard, Prince Georges and Anne Arundel counties. The tests cover from one to ten years. Average yields for early, medium and late are given on the basis of number of U. S. No. 1 potatoes produced per acre.

Cooking tests were made to determine varieties best adapted for steaming, baking, boiling in skins, boiling pared, French fried, and potato chips. Table II gives the results of these tests.

Descriptions are given of both old and new varieties used in the tests.

Table III lists the varieties best adapted to planting for early, medium and late crops and for different elevations. Varieties best adapted for general purpose, steamed, baked, boiled, chips and French fries, and for salads are listed.

Some general conclusions are:

Irish Cobbler is the best early potato variety for planting in Maryland.

Warba matures a little earlier than Irish Cobbler and is very satisfactory for the home garden, but its susceptibility to leaf roll makes disease-free seed stocks difficult to maintain.

Katahdin and Chippewa potatoes are satisfactory medium-early varieties. Chippewa matures one week to ten days, and Katahdin ten days to two weeks later than Irish Cobbler, and both can be used for early and late planting but Katahdin is better for late planting than Chippewa.

Sequoia can be expected to yield more than any other potato variety in Maryland. The vines are resistant to late blight and to injury from flea beetles and leaf hoppers, but the tubers are very susceptible to late blight rot. It is very resistant to milk mosaic, but very susceptible to leaf roll. It is a very late maturing variety.

Dakota Red is the best late potato variety for planting for home use at elevations below 1000 feet. Seed stocks can be kept over from year to year in home storage and such seed stocks may remain free from evidence of leaf roll for many years.

Smooth and Russet Rural potatoes are very good varieties for planting at elevations above 1000 feet. At lower elevations, they do not usually yield as well as Sequoia or Dakota Red.

Green Mountain and Up-To-Date are satisfactory late varieties, but do not yield as well as Sequoia, Rurals, or Dakota Red. Their susceptibility to virus diseases makes seed stock of these varieties difficult to maintain.

Preliminary tests indicate that the Potomac potato will prove to be one of the most profitable late varieties for planting in Maryland. Although spraying materially increases the yield, good yields can be obtained in unsprayed fields on account of its resistance to late blight and to injury from flea beetles and leaf hoppers. Potomac is a very good potato for baking.

New Insect and Disease Bulletin. The Departments of Entomology and Plant Pathology have just issued Bulletin No. 101, Flight Insects and Diseases in Victory Gardens, as a contribution from the Extension Service. It gives brief descriptions of common garden pests and recommended measures for their control. Dusts and spray materials are described and their uses are indicated.

The following paragraph may be of interest: The Outlook for spraying and dusting equipment for the Victory Gardener is not good. It may be necessary to go back to homemade equipment. A tin can with several holes punched in the bottom can be used for dusting many kinds of plants. Dust may also be sifted through double layers of cheesecloth or through corn sacks. Hand picking of such insects as bean beetles, potato bugs and squash bugs should be practiced.

Tomato Fertilizer Placement. Preliminary tests in 1942 on various methods of applying fertilizers to tomatoes were conducted at Ridgely and at College Park. At Ridgely there were 11 treatments with 3 rows in each plot 3 1/2 feet apart and replicated 3 times. Starter solution was used on all plots. The soil was a Sassafras Sandy Loam.

1500 pounds of a 5-10-5 fertilizer plowed down gave a yield of marketable fruit of 8.06 tons per acre. 500 pounds plowed under and 500 pounds in bands 6 inches apart and 4 inches deep yielded 7.45 tons. 1000 pounds drilled in gave 5.50 tons while 1000 pounds disked in gave only 4.07 tons.

At College Park 3 row plots, rows 5 feet apart planted in triplicate, was on Sassafras Silt Loam. The highest yield was 12.44 tons where 1000 pounds of a 4-12-8 was applied in bands 10 inches apart and 4 inches deep. 1500 pounds of 4-12-8 plowed under gave 11.33 tons, while 1000 pounds of 4-12-8 drilled in gave 9.77 tons. 1000 pounds applied behind the plow gave 11.30 tons where a starter solution had been used and 11.65 tons without the starter solution. These results seem significant enough to warrant a continuation of the experiments over a longer period to determine the best method of applying fertilizers for this crop.

Rainfall. Records at College Park for 1943 show that at the end of the year the rainfall was 6 inches below normal. Data are not at hand to indicate the situation over the State but it is quite likely that a similar or worse situation existed in other sections. The rainfall so far in 1944 has been slightly above normal but the deficit from last year has not been made up. Evidence of this fact is indicated by reports that water in the wells is much below normal for this time of year. The surface soil is well saturated but it takes considerable time to build up depleted water resources in subterranean recesses. During the summer period with its high temperatures and rapid surface evaporation, it is important to have ample resources of water underground.

NEWS-LETTER

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The Maryland Vegetable Growers' Association

W. R. Ballard, Secretary-Treasurer

Vol. XXI, No. 4 College Park, Maryland April 1944

Commodity Committees at Work. As directed at the annual meeting of the Association last January, Commodity Committees have been set up with the following persons as chairmen:

Sweet potatoes	-	S. W. Rayner, Salisbury
Tomatoes	-	H. H. Anderson, Princess Anne
Early Potatoes	-	Ralph Shockley, Snow Hill
Asparagus	-	J. L. Roberts, Galena
Cantaloupes	-	J. E. Andrews, Hurlock
		C. C. Phillips, Salisbury (Alternate)
Cucumbers	-	Russell Adkins, Mardela Spring
Snap Beans	-	A. L. Towson, Chestertown
Lima Beans	-	J. H. Chivers, Allen
Spinach	-	F. Ridgely Todd, Sparrows Point

One of the primary purposes of these committees is to assemble data on cost of production of specific crops for presentation to government officials having to do with the fixing of ceiling and support prices. They will also be in a position to follow trends, to study needs of producing areas and to support movements to further the betterment of the vegetable producing industry. Growers should use these committees as clearing houses for problems of inequities in marketing or governmental rules and regulations.

Victory Gardens Off. The Gallup poll indicates that the enthusiasm for gardening has eased off somewhat since last year. The nation-wide estimate for Mid-March indicated 19,600,000 gardens as compared with 20,600,000 at the same time last year. One encouraging feature, however, is the indication that one in every four is planning a larger garden than in 1943. It may be that the treatment accorded them last year by the weather man has left many gardeners feeling like the person in "Vegetables for Vermin" written by P. D. Sanders, Editor of Southern Planter.

"Rabbits skipped, rabbits hopped
Rabbits bit my turnip tops
Cutworms cut my cabbage down
Moles made mincemeat of my ground

Beetles bootled with my beans
Boogie-woogie shook my greens
Terrapins tormented my tomatoes
Bugs made lace of my potatoes

Earworms ate my roasting ears
All I reaped was toil and tears
I've Victory Gardened till I'm sore
But still buy vegetables at the grocery store" P. D. S.

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Green Mountain and Up-To-Date are satisfactory late varieties, but do not yield as well as Sequoia, Rurals, or Dakota Red. Their susceptibility to virus diseases makes seed stock of these varieties difficult to maintain.

Preliminary tests indicate that the Potomac potato will prove to be one of the most profitable late varieties for planting in Maryland. Although spraying materially increases the yield, good yields can be obtained in unsprayed fields on account of its resistance to late blight and to injury from flea beetles and leaf hoppers. Potomac is a very good potato for baking.

New Insect and Disease Bulletin. The Departments of Entomology and Plant Pathology have just issued Bulletin No. 101, Flight Insects and Diseases in Victory Gardens, as a contribution from the Extension Service. It gives brief descriptions of common garden pests and recommended measures for their control. Dusts and spray materials are described and their uses are indicated.

The following paragraph may be of interest: The Outlook for spraying and dusting equipment for the Victory Gardener is not good. It may be necessary to go back to homemade equipment. A tin can with several holes punched in the bottom can be used for dusting many kinds of plants. Dust may also be sifted through double layers of cheesecloth or through corn sacks. Hand picking of such insects as bean beetles, potato bugs and squash bugs should be practiced.

Tomato Fertilizer Placement. Preliminary tests in 1942 on various methods of applying fertilizers to tomatoes were conducted at Ridgely and at College Park. At Ridgely there were 11 treatments with 3 rows in each plot 3 1/2 feet apart and replicated 3 times. Starter solution was used on all plots. The soil was a Sassafras Sandy Loam.

1500 pounds of a 5-10-5 fertilizer plowed down gave a yield of marketable fruit of 8.06 tons per acre. 500 pounds plowed under and 500 pounds in bands 6 inches apart and 4 inches deep yielded 7.45 tons. 1000 pounds drilled in gave 5.50 tons while 1000 pounds disked in gave only 4.07 tons.

At College Park 3 row plots, rows 5 feet apart planted in triplicate, was on Sassafras Silt Loam. The highest yield was 12.44 tons where 1000 pounds of a 4-12-8 was applied in bands 10 inches apart and 4 inches deep. 1500 pounds of 4-12-8 plowed under gave 11.33 tons, while 1000 pounds of 4-12-8 drilled in gave 9.77 tons. 1000 pounds applied behind the plow gave 11.30 tons where a starter solution had been used and 11.65 tons without the starter solution. These results seem significant enough to warrant a continuation of the experiments over a longer period to determine the best method of applying fertilizers for this crop.

Rainfall. Records at College Park for 1943 show that at the end of the year the rainfall was 6 inches below normal. Data are not at hand to indicate the situation over the State but it is quite likely that a similar or worse situation existed in other sections. The rainfall so far in 1944 has been slightly above normal but the deficit from last year has not been made up. Evidence of this fact is indicated by reports that water in the wells is much below normal for this time of year. The surface soil is well saturated but it takes considerable time to build up depleted water resources in subterranean recesses. During the summer period with its high temperatures and rapid surface evaporation, it is important to have ample resources of water underground.

NEWS-LETTER

Issued by

The Maryland Vegetable Growers' Association

W. R. Ballard, Secretary-Treasurer

Vol. XXI, No. 4 College Park, Maryland April 1944

Commodity Committees at Work. As directed at the annual meeting of the Association last January, Commodity Committees have been set up with the following persons as chairmen:

Sweet potatoes	-	S. W. Rayner, Salisbury
Tomatoes	-	H. H. Anderson, Princess Anne
Early Potatoes	-	Ralph Shockley, Snow Hill
Asparagus	-	J. L. Roberts, Galena
Cantaloupes	-	J. E. Andrews, Hurlock
		C. C. Phillips, Salisbury (Alternate)
Cucumbers	-	Russell Adkins, Mardela Spring
Snap Beans	-	A. L. Towson, Chestertown
Lima Beans	-	J. H. Chivers, Allen
Spinach	-	F. Ridgely Todd, Sparrows Point

One of the primary purposes of these committees is to assemble data on cost of production of specific crops for presentation to government officials having to do with the fixing of ceiling and support prices. They will also be in a position to follow trends, to study needs of producing areas and to support movements to further the betterment of the vegetable producing industry. Growers should use these committees as clearing houses for problems of inequities in marketing or governmental rules and regulations.

Victory Gardens Off. The Gallup poll indicates that the enthusiasm for gardening has eased off somewhat since last year. The nation-wide estimate for Mid-March indicated 19,600,000 gardens as compared with 20,600,000 at the same time last year. One encouraging feature, however, is the indication that one in every four is planning a larger garden than in 1943. It may be that the treatment accorded them last year by the weather man has left many gardeners feeling like the person in "Vegetables for Vermin" written by P. D. Sanders, Editor of Southern Planter.

"Rabbits skipped, rabbits hopped
Rabbits bit my turnip tops
Cutworms cut my cabbage down
Moles made mincemeat of my ground

Beetles bootled with my beans
Boogie-woogie shook my greens
Terrapins tormented my tomatoes
Bugs made lace of my potatoes

Earworms ate my roasting ears
All I reaped was toil and tears
I've Victory Gardened till I'm sore
But still buy vegetables at the grocery store" P. D. S.

In any event it is vitally important that all who can have as good a garden as possible to supplement commercial production and to relieve the strain on transportation and marketing facilities. Much of the energies usually devoted to recreation might better be applied to gardening with probably equal returns in health and well being and at the same time make a worthwhile contribution to the war effort.

Tender Beets. Experiments were conducted at the Ohio Experiment Station to determine the relation of the fertility levels to tenderness of garden beets. The variety used was Detroit Dark Red. Both early and late crops were grown. The plot treatments included (1) no fertilizer, (2) no nitrogen, (3) no phosphorus, (4) no potassium, (5) complete fertilizer, (6) double nitrogen, (7) double phosphorus, (8) double potassium.

"Indications from this study are that the kind and amount of fertilizer in the soil and the size and maturity of the beets are factors related to tenderness of beets when boiled. The plot receiving complete fertilizer yielded beets that were more tender than those grown on plots containing an excess of one nutrient or on those lacking necessary nutrients. Among beets of the same maturity large ones were more tender than smaller ones. These results applied to both the early and late crops.

Longevity of Seeds. Market gardeners who have found particularly good strains of seeds, sometimes buy more seed than necessary for immediate needs to insure an authentic source. The length of time seeds remain viable depends primarily upon the particular type, but is also influenced by the original quality of the seeds and the conditions under which they are kept. Most vegetable seeds need to be well dried out and are preferably kept in closed containers under moderate temperature conditions. The following table indicates approximate length of time seeds may be expected to give satisfactory germination.

Asparagus	3 years	Muskmelon	5 years
Bean	3 "	Mustard	4 "
Beet	4 "	Okra	2 "
Broccoli	5 "	Onion	1 "
Brussel Sprouts	5 "	Parsley	3 "
Cabbage	5 "	Parsnip	1 "
Carrot	3 "	Pea	3 "
Cauliflower	5 "	Pepper	4 "
Celery	6 "	Pumpkin	4 "
Chinese Cabbage	5 "	Radish	5 "
Collard	5 "	Rutabaga	5 "
Cucumber	5 "	Salsify	2 "
Eggplant	6 "	Spinach	5 "
Endive	5 "	Squash	5 "
Kale	5 "	Sweet Corn	1 "
Kohlrabi	5 "	Tomato	4 "
Leek	5 "	Turnip	5 "
Lettuce	2 "	Watermelon	5 "

It is generally recommended that this crop be grown in the fall. However, if the grower has some provision for irrigation, plants can be set in the ground in the spring and will produce some cuttings in June and a heavy cutting in the fall. Much hinges upon keeping up vigorous, active growth. A deep, fertile loam soil is preferred and good culture is essential. Side dressings of nitrogenous fertilizers are helpful. The principal pest is the aphids which attack the flowering shoots making them unsalable. This vegetable has become popular on the markets during recent years and is likely to grow in favor.

NEWS-LETTER

Issued by

The Maryland Vegetable Growers' Association

W. R. Ballard, Secretary-Treasurer

Vol. XXI, No. 5 College Park, Maryland May 1944

Support Prices For Spinach. The War Food Administration has announced the support price schedule for spinach for canning designed to assure fair returns to farmers who grow or are growing spinach under contract with certified canners. At a meeting of canners and growers in Baltimore April 28th, spinach canners agreed to make every effort to operate at full capacity during the remainder of the season with the understanding that a support price for spinach cut above the crown would be announced. Because of the shortage of trimming labor in Baltimore, canners stated that it is necessary to have the spinach delivered to them cut above the crown in order to enable them to handle the crop

Support prices on spinach for canning apply to the acreage under contract with certified canners and have been designated by the War Food Administration for the 1944 season:

Virginia, Maryland, Delaware, and parts of Pennsylvania: $70 per ton cut below the crown.

Delivered Baltimore City canners from Virginia, Maryland, Delaware, New Jersey, and parts of Pennsylvania, $100 per ton cut above the crown and trimmed.

Unless otherwise specified, schedule of prices are on a field run basis and refer to spinach for canning and, except California, include delivery to the processor's plant.

The support prices set by the WFA are those which canners must agree to contract with growers in 1944 in order to become eligible for protection under the support program for the canned product. In view of the lateness of the season, WFA states that many processors and growers may find it difficult to make contracts. Nevertheless, support prices will serve as the basis for contracting and certification of canners.

Maryland Tomato Growers Fortunate. Root-knot caused by nematodes is so bad on tomatoes in some of the southern states, that attempts are being made to do something about it. One ingenious method reported by C. L. Isbell, horticulturist at the Alabama Experiment Station is the grafting of tomatoes on jimson weed rootstocks. He reports excellent yields of tomatoes from grafted plants in nematode-infected soil. No difference in quality could be detected. Eggplant also seemed to do well on jimson weed stock, but peppers did very poorly, according to Isbell.

Potato Ring Rot. The following notes on this disease are gleaned from Maine Extension Circular 189:

Control of potato ring rot is of great importance to the industry and to the nation because the need continues for maximum production of potatoes and be-

cause the disease is spreading each year into previously uninfected seed sources.

Ring rot is a highly infectious disease. Although unknown in America before 1931 it had spread to at least 37 states by 1940. Ring rot has already resulted in heavy financial losses to certified seed growers, table stock growers and merchants. Most growers who now have ring rot on their farms got it by buying seed infected by the disease. Ring rot is so infectious, however, that it may be spread also by means of barrels, racks, planters, or any other equipment used with infected potatoes and later used in handling ring-rot-free tubers that are to be planted. A cutting knife drawn through a ring-rot-infected potato can carry the disease to many other tubers cut with the same knife.

Ring rot does not live over winter in the soil in rotted material, but lightly infected potatoes may live over and come up as volunteers. It is dangerous practice, therefore, to replant on land where ring rot was found in potatoes the previous year. The disease apparently is not spread from plant to plant by insects, nor is it carried by the wind. To get rid of ring rot, purchase and use only uninfected seed. Plant on land not in potatoes recently. Disinfect all equipment using 2 pounds of blue vitriol dissolved in 10 gallons of water, or 1 pint of 40% formaldehyde in 15 gallons of water, or 1 gallon stock dip (phenol coefficient of 6) to 50 gallons of water, or organic mercury or acid mercury solutions left after treating seed stock.

The blue vitriol solution, which is cheapest, can be used on bins and containers. Machinery or cutting knives that might be corroded by the vitriol should be disinfected with formaldehyde or stock-dip solution. To kill ring rot organism, disinfectants must come in contact with it. Make sure that all dirt is removed by scraping or washing before barrels are dipped in the disinfecting solution, and before bins or machinery are sprayed. An oil drum split lengthwise makes a good container for the disinfecting solution. A barrel can be placed in this tank and rolled. Use only formaldehyde or stock dip in metal drums. Acid mercury solutions, if used, should not come into contact with metal.

The first sign of ring rot in the tuber is a creamy yellow discoloration of the vascular ring. The breakdown later reaches the surface of the tuber. At digging time ring rot may have caused cracks in the skin of the tuber. Use certified seed stock and avoid trouble.

The Victory Gardener, 1944

The fruits of Victory Garden toil and trouble
Like Mercy, overflow with meaning double.
My table joys in wholesome, tasty fare
With which no far-grown produce can compare
And I have health derived from labor spent
And pride in personal accomplishment
But there's a second blessing in the thought
That every bean and carrot in my plot
Each bulging beet, each compact cabbage head
Each rich tomato, luscious, firm and red
Releases other food in like amount
On which a nation deep in war may count
To feed heroic battle lines, or send
To nourish and support a fighting friend
In forty-four again I pledge my best
To garden effort thus so doubly blest

NEWS-LETTER

Issued by

The Maryland Vegetable Growers' Association

W. R. Ballard, Secretary-Treasurer

Vol. XXI, No. 6 College Park, Maryland June 1944

Selection and Preparation of Vegetables for Freezing. Preservation in Locker Plants

Under the above title C. H. Mahoney and E. P. Walls have just issued Miscellaneous Publication No. 29. It points out the necessity of seeing that only the very best quality of vegetables is used for freezing. The public has come to recognize generally the high quality of frozen products. This preferred position can be maintained only on the basis of quality.

The growth of the freezing industry has been rapid. The U. S. Department of Agriculture estimates that at the end of 1943, there were 5200 frozen food locker plants, serving 1,500,000 families of which 1,300,000 were farm families. An expansion program which has government approval, provides for 550 new locker plants in 1944, with a capacity of 250,000 new lockers.

Varieties of the same crop differ greatly in their suitability for freezing. A list of those known to be well adapted for freezing and that yield well in Maryland is given.

Proper preparation of material for freezing is stressed. One of the first steps is harvesting the product when in its best edible condition. Quality will be no better than at harvesting time - do not expect freezing to improve it.

Deterioration in quality is caused by bruising - handle carefully.

Speed of preparation is a "must" in any method of food preparation. Time from field to freezer should be as short as possible.

Sort to remove broken, damaged, or over-mature material, and grade into classes based upon size and maturity.

Wash thoroughly to remove dirt and spoilage organisms.

Blanching intensifies green color and inhibits enzyme activity. Steam blanching is preferred to hot water since it results in less loss of water soluble nutrients.

Cool thoroughly and promptly in cold running water after blanching.

Drain and package immediately. The dry pack in moisture-vapor proof package is preferred. Put into freezer before material warms up again.

Freezing should be rapid for asparagus, sweet corn, and fleshy greens. Storage should be at 0° F or below.

Peas. Recommended varieties are: Dark Podded Thomas Laxton, Laxton's Progress, Thomas Laxton, and Glacier. Harvest at proper stage of maturity -

tenderometer reading should not exceed 95 pounds per square inch.

In "run of pod" product, over-mature peas may be separated by brine flotation in a 13% salt solution. Freeze within 3 or 4 hours of harvesting. Blanching in hot water at 185° F to 195° F gives more acceptable cooked product than at higher temperatures - a blanching time of 3 minutes at 190° F is recommended.

Cool with cold running water after blanching. Freeze at 0° F or below and store at 0° F.

Sweet Corn: Recommended varieties are Golden Cross Bantam, Bantam Evergreen, Aristogold No. 1, Narrow Grain Evergreen, Stowell's Evergreen, Stowell's Evergreen Hybrid 14 x 5, Country Gentleman, Howling Mob.

17 to 19 days from first appearance of silks on 50% of plants harvested in late July and August will give a high quality whole grain product. In cooler weather of September twenty to twenty-one days would be satisfactory.

Husk ears and sort into various stages of maturity and drop into cold water to cool them down to 60°F if possible. Trim ears and wash in cold running water. Blanch on cob in boiling water from 6 to 15 minutes. Cool in running water after blanching. Cut corn from cob, wash in cold water, drain, and pack. Freeze rapidly and store at 0° F.

Green Lima Beans: Recommended varieties Early Baby Potato, Baby Fordhook, Henderson, Fordhook, Concentrated Fordhook, King of the Garden.

Harvest when only 5% to 10% of beans have changed from green to white.. White beans contain only one-third as much Vitamin C as green beans.

Steam blanching is prefenable from the standpoint of conserving nutrients, but hot water blanching is probably more practical under home conditions. One and one-half minutes is recommended for hot water blanching of Baby lima varieties, two and one-half minutes for potato limas and three and one-half minutes for pole limas. Cool promptly, drain and pack in moisture-vapor-proof containers. Freeze at 0° F or below, and store at 0° F.

Snap Beans: Recommended varieties - Giant Stringless Green Pod, Stringless Green Pod, Kentucky Wonder, Round Pod, Kidney Wax.

Harvest the summer crop before there is any appreciable development of beans in the pod. Snip off each end of pod and wash thoroughly in cold running water. Freeze small sizes whole, cut larger ones into one inch length.

Blanch 3 minutes in boiling water. Overblanching results in "slimy" condition of pods when cooked. Chill immediately after blanching, even if necessary to use ice in the second cooling water. Drain, pack, and freeze at 0° F or lower and store at 0° F.

Picking Tomatoes In these days of efficiency experts thought is being given to speeding up agricultural operations. Purdue University has issued Leaflet 258, entitled "Making Movements Count in Picking Tomatoes". Illustrated by a series of good pictures , 4 major directives are made as follows: 1 - Use a Handle on the Hamper. 2 - Pick With Both Hands. 3 - Pick as many Tomatoes as Possible in each Hand Before Moving Hands to the Hamper. 4 - Pick Two Rows across the Field and Keep the Hamper in Front of You.

By Using These Four Rules You Will Pick Tomatoes Easier and Faster. Try Them. This is a contribution by John W. Oberholtzer from the Purdue Farm Work Simplification Laboratory.

Avoid Hyoscamine! In reporting the grafting of tomatoes on jimson weed to prevent nematode injury, it was not supposed that any Maryland grower would adopt the process. Anyway, results of experiments have come to hand which indicate serious objections to the method. It appears that the hyoscamine alkaloid of the Datura root system can be translocated to the tomato tops and fruits. Hyoscamine is decidedly poisonous! The tomatoes produced on jimson weed grafted plants may prove dangerous to health. So, if you had planned to set your acreage with such grafted plants, don't do it!

NEWS-LETTER

Issued by

The Maryland Vegetable Growers' Association

W. R. Ballard, Secretary-Treasurer

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Notes on European Corn Borer

According to the New Jersey Agricultural Experiment Station, proper spraying or dusting for the corn borer caused the percentage of smutty ears to drop as much as 100 percent. There are two or more broods of European Corn Borer in the sweet corn area of New Jersey, Maryland, and Pennsylvania. This insect also attacks potatoes and other crops. Rotenone dust applications must be made at the time borer worms are hatching, to be effective.

A salt-like plant food substance, now being used experimentally, may prove very effective against European Corn Borer. This material is mixed with fertilizer and applied to the soil. Plants like corn take it up into their plant tissues and leaves, and are rendered so distasteful that insects leave the fields. Fortunately, the corn or plant taste for animals or humans is not affected by this treatment. Only insects are repelled. The treatment is said to cost only about 30 cents an acre. - (From The Miller Analyst).

Seed Growers Do a Good Job. Lee Marshall, Director of Distribution, War Food Administration, in an address before the American Seed Trade Association, in Chicago, June 30, 1944, gave some pertinent facts regarding the tremendous contribution seed growers have made toward the war effort.

In the South Pacific, the yield of crops grown from American seeds at military bases will exceed 150 million tons. Thousand of American soldiers, prisoners behind German lines, will eat fresh vegetables grown from the 15 thousand pounds of seeds shipped to them. This is only a small part of the 18 million pounds of all kinds of vegetable seeds shipped to our allies and armed forces abroad.

Fifteen million pounds of beans, beets, carrots, onions, peas, radish, cucumber, and cabbage have been sent during the last 12 months to Russia and the United Kingdom. The largest combined total, 4,500,000 pounds of seeds has gone to Russia while the smallest shipment was 35 pounds to Ethiopa.

The economy of shipping seeds rather than produce is easily seen. As an example, the 14,000 pounds of tomato seed scattered over 5 continents produced 194,000 tons of food. Looking at it from another viewpoint the 18 million pounds of vegetable seeds in a single shipment could have been handled in a single 10,000 ton cargo vessel with room to spare. On the other hand, to ship the amount of food produced from these seeds, would have required 950 ships of like capacity.

Despite these shipments, home requirements have been amply met. This was done in face of the fact that before the war many items were imported from countries now in the war zone. The seed growers anticipated this situation so were well prepared when importations ceased.

Four important biennial seeds - beets, cabbage, carrot, and onion have been critically short until the 1943 season and all but carrots are still in small supply. The 1944 seed crop should greatly exceed the previous supply. It is expected that by 1945 supplies will be adequate not only to take care of current needs but

to allow for the building up of stock piles for emergencies. There will undoubtedly be strong export demands for some months after the close of the war.

Annual Exhibits. Because of the poor showing made in vegetable classes, it has been decided to confine the annual exhibit held in connection with the Vegetable Growers' Meeting in Baltimore next January to the schedule of classes for Irish and sweet potatoes. If it were possible to hold the Show in November, as was the custom during Maryland Week years ago, it would be possible to stage an exhibit which would be representative of the industry, and a credit to the State.

On the other hand, the potato display brings to the attention of the growers, the progress being made in the development and testing out of new varieties, which might be adapted to Maryland conditions.

More satisfactory varieties are needed in the warmer sections of the state for the fall crop. The Dakota Red, which has been the standard sort since the McCormick was driven out by virus diseases, is too susceptible to the late blight, and is too rough and unshapely. Varieties such as Sequoia, Sebago, and other new sorts have succeeded well in some sections, but it is not likely that they will prove to be the final answer.

The cooperative project with the U. S. Department of Agriculture makes it possible to take advantage of breeding results carried on by potato breeders, and to test them out in the principal producing sections in Maryland. Progress to date has been encouraged and it is likely that results will be speeded up as the work continues. It is not too difficult to de elop resistance to a particular disease but it is another matter to combine resistance to all the major diseases, and at the same time insure quality in the product, productiveness and adaptability to a particular condition.

Even when and if this is accomplished, it takes time to develop an ample and dependable source of certified seed, and more important to educate the grower to see the importance of using such stock.

One promising line of investigation is the testing of certain seedlings, which apparently can be grown as an early crop, dug, cut, treated chemically, and immediately replanted for the fall crop. If some such method could be perfected, it would eliminate the necessity of keeping planting stock on cold storage for two months, or more, during the warm summer period.

NEWS-LETTER

Issued by

The Maryland Vegetable Growers' Association

W. R. Ballard, Secretary-Treasurer

Vol. XXI, No. 8 College Park, Maryland August 1944.

Fertilizer Situation. It is predicted that the 1944-45 use of fertilizer will break all records. Approximately 11,500,000 tons were used in 1943-44. With the cooperation of manufacturers, dealers, and farmers, it will be possible to exceed this figure by a substantial margin.

Normally, approximately 85% of the fertilizer is delivered during the first six months of the year with the remaining 15% delivered during the last half of the year. War conditions make it desirable for farmers to speed up deliveries, hauling as much this fall as possible.

If fertilizers ordinarily contribute from 20 to 25 percent of the total crop distribution of the nation, as has been estimated, deliveries from January 1 to June 30 of 8,000,000 tons would make a proportionate contribution of 15 to 16 percent. The other 9 to 10 percent will materialize, according to the willingness of the farmer to accept and store on the farm a substantial portion of his annual fertilizer requirements between now and January 1, 1945.

One reason why early deliveries are urgent is the fact that trucks and tires are wearing out and deliveries are becoming increasingly uncertain.

The Vegetable Situation. The aggregate annual production of commercial truck crops for fresh market shipment has been relatively stable during the past six years. In this period the total aggregate production (during 1938 through 1943) ranged between 6.5 million and 7 million tons annually. This was about 10 percent higher than the general level of production for the period from 1929 through 1937.

Prices during most of 1943 were more than double the 1935-39 average, and in the spring of that year were unusually high. Farm wage rates in the United States for 1943 were also more than double the 1935-39 average.

Estimates made to date point to a record production of fresh market vegetables during the 1944 season. The total production for the season may be as much as 15 to 20 percent larger than for the 1943 season. The aggregate production of summer season vegetables estimated to date is 13 percent larger this season than last.

Prices received by farmers for truck crops for fresh market are expected to follow a downward seasonal movement through September. It seems probable, however, that the general level of such prices will be only slightly lower than that prevailing during the summer of 1943.

A large early summer crop of snap beans, which is estimated to be about 14 percent larger than a year ago and nearly 60 percent larger than the 10 year (1933-42) average, has brought about a depressed price for this crop. Higher prices may be anticipated for the late crop.

Prices received for cabbage were unusually high during the winter and spring months of 1943, the average price for the peak month of April being around $90.00

per ton, as contrasted with $32.00 per ton in April of this year. However, the winter and spring production was estimated to be nearly two-thirds more than in 1943.

Midsummer production of cantaloupes is expected to be about 40 percent larger than last and the late summer acreage is estimated to be 27 percent larger than last year.

Onions should be on the market in good supply since acreage and production are higher than last year.

The 1944 production of truck crops for processing is expected to be about as large as in 1943.

The total production of potatoes in the United States is indicated at 399 million bushels based on July 1 condition. A crop of this size would be 14 percent smaller than the record crop of 1943 but still 10 percent larger than the 10-year (1933-42) average. Ceiling prices in general are the same as for the 1943 crop.

The 1944 crop of sweet potatoes is indicated to be 66.4 million bushels based on July 1 condition, or 9 percent smaller than the 1943 crop and 1 percent smaller than the 10-year average.

The trend in civilian per capita consumption of sweet potatoes has been moderately downward for the last two decades. Civilian per capita consumption declined from a level of about 30 pounds in the early 1920's to about 20 pounds in the early 1940's. It amounted to about 22 pounds during the 1943-44 season.

Improvement of the Lowly Onion. Dr. H. A. Jones, formerly head of the vegetable work in Maryland, and his associates in the U.S.D.A. have made definite advances in the improvement of the onion.

As with many plants inbreeding results in lessened vigor. The problem was how to take advantage of hybrid vigor. Artificial canning is not practical from a commercial standpoint with self-fertile types because of the tedious process of emasculation.

The use of the male sterile Italian Red 13-53 has made the mass production of hybrid seed possible, and it is for the working out of this problem that Dr. Jones was recently given an award for this outstanding success.

The male-sterile character found in Italian Red 13-53 has now been incorporated in practically all important commercial varieties and is perpetuated through the seed rather than in the clones. This not only makes possible the combining of those lines that are resistant to the attack of various insects and diseases, but also provides a method of obtaining the expression of the maximum amount of vigor. The production of hybrid seed opens up an almost unlimited field for the production of improved onion varieties.

NEWS-LETTER

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The Maryland Vegetable Growers' Association

W. R. Ballard, Secretary-Treasurer

Vol.XXI, No. 9. College Park, Maryland September 1944.

Adjustment in Potato Prices. Government regulations allowed an increase in potato prices in certain states (includes Maryland) of 90 cents per cwt. over prices originally announced for August 1944. This increase was valid up until September 16. From September 17 to 30 the increase allowed will be only one-half, or 45 cents per cwt.

Changes in governmental regulations have been so rapid that it is difficult to keep up with them. It is important for those affected to keep informed. Because of the infrequency with which this news-letter is distributed, little attempthas been made to keep members posted on changes in regulations.

One item of general interest from the consumer's standpoint is that because of the very large crop this year, onions have been designated as a Victory Food Selection for the period September 21 through October 7, 1944. This is a very minor crop in Maryland, but consumers with suitable storage facilities could very well lay in their winter's supply as a help toward moving what is probably the largest crop in history.

New Fertilizer Circular. Fertilizers and Their Uses for Maryland has just been issued by the Department of Agronomy and Horticulture at the University of Maryland. "The War Food Administration, F P 05, Rev., gives the fertilizer materials and mixed fertilizer grades permitted for use in Maryland. Since fertilizer materials are critical war materials, the user should purchase his fertilizers as early as possible. Even then, as in the case of other war materials, it may be necessary to accept some substitute grades."

Suggestions in the Circular are given as an aid in selection of fertilizer grades and rates per acre for the different crops and soil conditions. Wherever more than one grade is given they are not listed in any order of preference. The minimum rate per acre is probably higher than the usual broadcast application, however, it is believed justified. Cover crops should be grown wherever possible. The fertilization of these cover crops to obtain maximum growth, and then the disking in or plowing under with another application of fertilization, is desirable.

A revision of interest to certain growers is as follows: The 3-19-15 grade was added for sweet potatoes and similar crops and soil conditions where more potash is desired. The 10-0-10 grade is for the sidedressing of vegetables and similar crops where more nitrogen and potash may be needed for good growth.

Copies of this publication may be obtained from the Experiment Station or Extension Service.

A New Lead - Rohm & Haas, Philadelphia chemical firm, is experimenting with a new synthetic organic chemical which holds promise not only as a fungicide, but also as an insecticide. The material is called Dithane and the method of application is to spray it on the ground to be absorbed by the roots of the plants. Its absorption by the plant carried with it resistance to attacks of fungus and insects. Dithane is harmless to plants and non-toxic to man.

In field tests it has proved effective against late blight of potatoes, and not only repels aphids but also kills them. Dithane apparently kills both chewing and sucking insects. It has given good results in the control of bean beetles. Tests so far made indicate that it does its best job on potatoes when mixed with zinc sulfate and lime in a 4-1½-100 ration. The Company considers it most promising as a fungicide but thorough tests will be needed to determine its widest application. If experience upholds its preliminary successes, it may add another important weapon in the battle against plant pests. Rohm & Haas plan to put Dithane on the market this fall.

New Outlet For Sweet Potatoes. The Alabama Experiment Station is experimenting with new uses for the sweet potato. Several new products have been developed. One method is to steam or bake the potatoes, peel, pulp, and cream into a puree. This material is stored at low temperatures for future use. The Alabama Station prepared 1,000 bushels in this way for storage. After four months in storage, it appeared to be just as good as when placed in storage. Tests made by a commercial cafeteria for use in pies, custards, souffle, etc. have given the material high rating. The puree was stored in 52 lb. lard pails, each pail representing approximately 2½ to 3 bushels of fresh potatoes. This material should give the public a high grade sweet potato product during the months of May, June, July, August and September.

This material will not take the place of the fresh product, but offers an outlet for surplus potatoes during the period when the fresh product is not available.

Fungicides and Insecticides. The present situation on various materials as given by the A I F News is as follows:

Calcium Arsenate	adequate
Calcium Caseinate	"
Copper sulfate	"
Cryolite	" to ample
Formaldehydes	"
Lead Arsenate	"
Mercury compounds	"
Nicotine	tight
Pyrethrum	critical
Rotenone	very tight
Spreaders and Stickers	probably adequate
Sulfate	adequate
Tartar emetic	tight
Zinc compounds	oxide tight, sulfate adequate.

It would be wise for growers to anticipate their needs and lay in a supply of insecticides and fungicides in advance of the season for application.

NEWS-LETTER

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The Maryland Vegetable Growers' Association

W. R. Ballard, Secretary-Treasurer

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Phosphorus For Spinach. New Jersey Experiment Station reports on fertilizer tests made on spinachin pot experiments to get a line on possible modifications of application methods for field use.

Soil used was a sassafras light loam, pH 5.0, giving a negative test for phosphorus, a fair test for nitrogen and potash, and a poor test for calcium and magnesium.

Twelve different treatments were given. The addition of calcium magnesium limestone had a marked effect in increasing yield on this soil. The type of growth of the roots on the seedlings was responsible for the rate of growth in the different cultures. The plants made a tap root with very few laterals. Thus, if the fertilizer was placed directly under the seedlings, the tap roots got to the fertilizer sooner than the lateral roots did where the fertilizer was placed to one side. On the acid soil plants grew tap roots 3 to 4 inches long with very few short lateral roots. The plants made a growth of 1 1/2 to 2 inches and then stopped growth. When the leaves stopped growth they were very dark green with reddish-purple veins similar to plants grown in pure quartz sand from which phosphorus was withheld from the nutrient solution. The roots were white and appeared active up to this time. Shortly afterwards the roots began to turn brown and die. The seedlings on the limed soil with the same treatments continued to grow normally and made 18 inches of growth during the same period that those on the acid soil grew 3 to 4 inches. They not only made contact with the fertilizer placed 5 inches below the seed, but also sent out lateral roots to contact the fertilizer placed at one side.

Where only starter solution was added on the acid soil, root growth was not as rapid but similar in type to that where lime was applied to the soil.

The highest yield on both acid and limed soil was obtained where the fertilizer was applied in solution in an inch wide band 5 inches directly beneath the seed. Placing dry fertilizer in this location caused considerable injury to the plants on the acid soil, but not on the limed soil.

Mixing the fertilizer thoroughly with the soil gave the second best yield on the acid soil, but on the limed soil it was no better than where only a starter solution was applied.

Applying the fertilizer in solution as a side-dressing was more effective than where it was applied in the dry form.

Placing the fertilizer in a band to one side of the seed was no better than the check on the acid soil, but did produce a good response on the limed soil. In this placement, the extent of the lateral root development determined the effectiveness of the fertilizer.

The higher yields on the limed soil may be due to several factors. On the basis of the effect of lime on this soil, it would seem that nutrients were released as a result of the lime. Also, it is possible that toxic materials were taken out of solution. The direct effect of the change in pH does not seem to be a factor since it is possible to grow spinach at a pH of 4.0 if toxic materials have been eliminated Since the addition of nutrients to the acid soil did not produce a growth comparable to that produced on the limed soil without additional fertilizer, we must assume that toxic materials were responsible for the retarded growth.

The data from the acid soil plots offer a suggestion on the availability of phosphate fertilizer. Phosphorus was shown to be practically deficient by soil test, and the seedlings exhibited phosphorus deficiency symptoms.

In summing up the results the workers say:

1. The general recommendation of applying dry fertilizer broadcast on limed or acid soil and thoroughly mixing it to a depth of 4 or 5 inches seems to be as good as any method of placing fertilizers, as far as these studies are concerned.

2. The addition of limestone apparently released phosphorus from the soil and produced a remarkable growth of leaves on what seemed like a very infertile soil and made it possible for the roots to contact the fertilizer placed in bands.

3. There was no evidence that phosphorus was made unavailable on the acid soil but the possibility of toxicity of aluminum, iron, or manganese being minimized by the application of phosphorus in solution is not excluded.

4. Various placements of fertilizer were ineffective in promoting growth because the roots did not make contact with the fertilizer before they died of phosphorus deficiency.

5. The importance of a starter solution in growing spinach with less fertilizer is emphasized.

The Vegetable Situation. "The index of prices received by farmers for commercial truck crops for fresh market shipment increased sharply from 91% in 1939 to an average of 245% for 1943 (1910-14= 100). In 1943 and for most of the first 9 months of 1944, truck crop prices have averaged considerably higher than the index of all farm products, and both indices are markedly higher than the wholesale prices of all commodities. However, the level of truck crop prices in 1943 and 1944 was relatively much lower than the index of farm wage rates (318, July 1944), an important item in costs of truck crop production. It is unlikely that this relatively high level of truck crop prices compared with all farm products will be maintained after the end of fighting in Europe."

"Four crops - tomatoes, sweet corn, green peas, and snap beans, represent approximately 90% of the total tonnage of the 11 important commercial truck crops for processing in 1944. A considerable increase in the production in these crops has occurred to meet the increased needs of the war period. The 4-year (1941-44) average production was larger than the pre-war (1935-39) average production by 130% for snap beans, 58% for tomatoes, 57% for green peas, and 47% for sweet corn. Post-war adjustments probably will include some reduction in the acreage of truck crops for processing.

"A frozen vegetable pack around 5% larger than in 1943 is now anticipated. On a fresh basis this pack represents less than 3% of the total production of commercial truck crops for processing. Approximately 3/4s of this pack is expected to be available for civilian consumption. Frozen vegetable holdings in cold storage of 164 million pounds on September 1 were about 30 million pounds larger than a year earlier."

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W. R. Ballard, Secretary-Treasurer

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Are You Careless? Careless handling of culled-cut potatoes may be a dangerously effective way of spreading late blight, according to Dr. E. W. Bodine, Associate Plant Pathologist at Colorado State College of Agriculture.

Writing about a survey he and others made last August, he tells of finding "six separate cull piles in one dumping area, all showing infected plants". In another district, a large cull pile with infected plants was on "the wet banks of a drainage canal, 50 feet from a commercial field. In all these piles, sweet clover and sunflower provided ample shade and protection ---- favorable conditions for infection. Microscopic examination revealed abundant dessicated sporangia on both stem and leaf lesions. In one pile of 300 plants, selected at random, 263 showed blight lesions." The report refers to these and other piles as "dangerous sources of inoculum."

One result was a county campaign for destruction of such piles. Another was recommendation that copper sprays or dusts be applied to fields as a protective measure. (From A I F News)

New Type Duster. The Miller Analyst says "A new type duster made by The Messinger Company is a combination of duster and liquid sprayer. Water can be injected with the dust as a fog, and will cause a special made dust to adhere exceptionally well to foliage."

New Lettuce Strains. Ross Thompson, Plant Industry Station, U.S.D.A., Beltsville, Maryland, has developed some new strains of lettuce which are even better than the Columbia strains previously released. A small quantity of seed is available for test purposes. Growers who wish to try out these new offerings should contact Ross Thompson or get in touch with their local county agent.

Big Onions. While Maryland climate is not particularly well adapted to onion production, those who are interested in this crop might very well try the Utah Valencia. Under good growing conditions this variety will attain much greater size than Ebenezer, Yellow Glove Danvers, or similar varieties. Plants from seed should be started in the greenhouse or hotbed between January 15 and February 15, and set out in fertile soil April 1 to 15. Soil should be well drained but retentive of moisture. Onions are heavy feeders and should be heavily fertilized.

The Utah Valencia is a good keeper and the large size brings good prices on the market.

Keep Up With the Advance in Potatoes

A remarkable new early potato has been developed by Dr. R. A. Jehle, State Plant Pathologist of the Maryland Experiment Station and Extension Service in cooperation with Dr. F. J. Stevenson, Senior Geneticist of the United States Department of Agriculture. It is a round white potato with shallow purple eyes and is very much smoother than the Irish Cobbler. It has a rich cream colored flesh, which when cooked makes it appear as if much butter had been added. For the past three years, it has outyielded the Irish Cobbler variety when planted for the early crop in Worcester County and in 1944 it also outyielded the Irish Cobbler variety in Garrett County and Howard County. Recent tests indicate that it will also be a valuable potato for late planting. In 1944 a larger yield of the U.S. No. 1 potatoes was obtained from stored seed of this seedling than from stored Dakota Red seed in Worcester County.

The most remarkable characteristic of this seedling is the fact that spring grown seed can be profitably used to plant the late crop. In Worcester County during the last three years, a larger average yield of U.S. No. 1 potatoes was obtained from seed harvested in July, treated with a chemical to break its dormancy and planted immediately, than from Dakota Red seed produced the previous season and kept in cold storage during the summer. As soon as sufficient seed is available, this seedling will be named and introduced.

A new scab resistant potato, Menominee, has been developed by the Michigan Experiment Station in cooperation with the United States Department of Agriculture. It is a round, white, late maturing potato and has good cooking quality. Results of experiments conducted in Maryland in 1944 indicate that it is suitable for planting in all parts of the state. In Garrett County it yielded just as well as the Sequoia and Potomac varieties and in Worcester County it yielded better than the Dakota Red variety. It is not suitable for early planting in Maryland at elevations below 2000 feet.

MARYLAND VEGETABLE GROWERS' ASSOCIATION

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